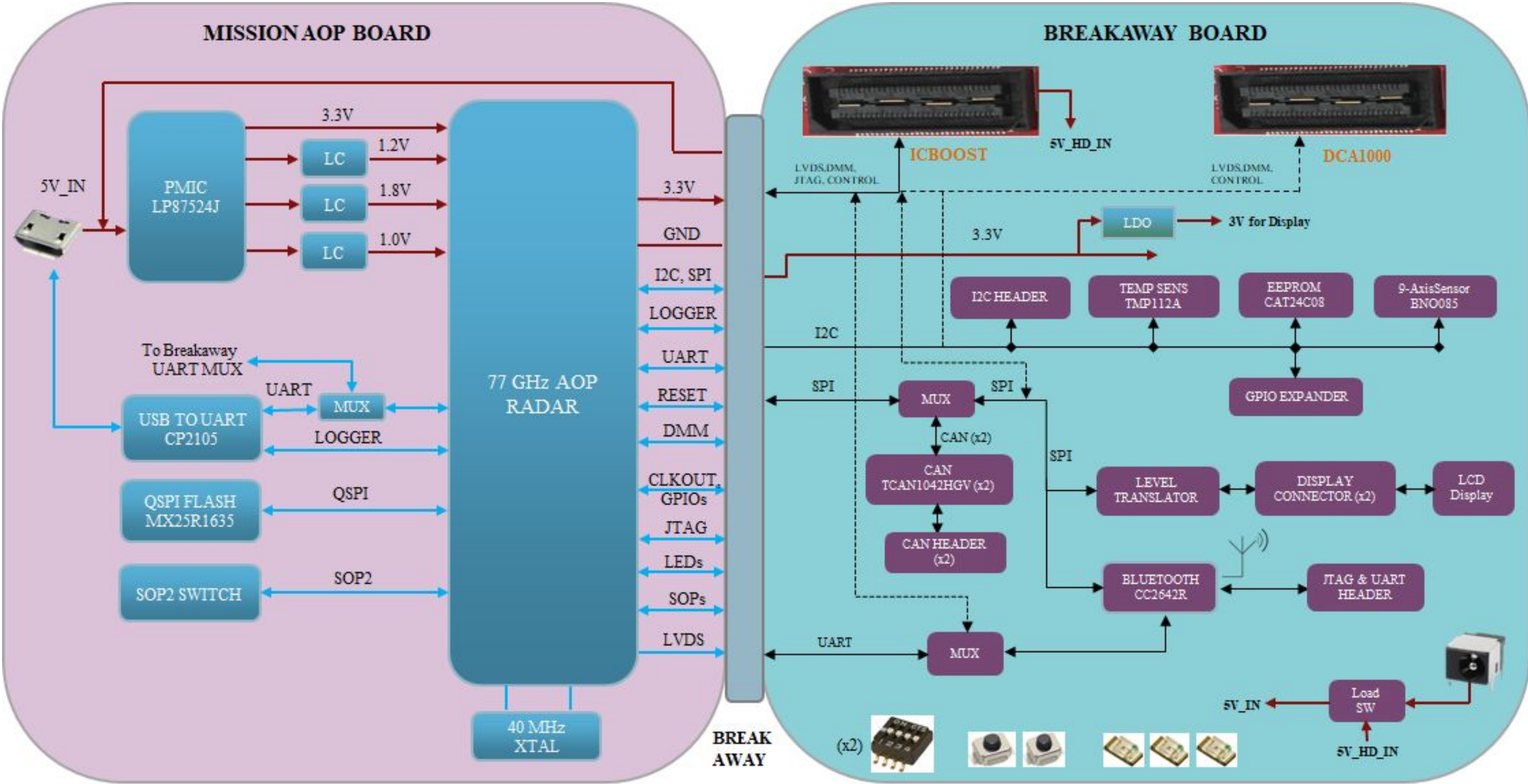


BLOCK DIAGRAM

Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
B	1	09/06/2021	Adrian Ozer	Updated all 22uF caps on PMIC & LC Filters to 0805 low ESL caps CGA4J1X7T0J226M125AC
B	2	09/06/2021	Adrian Ozer	Added additional 22uF cap to 1V supplies
B	3	09/06/2021	Adrian Ozer	Updated L12, L14 to BLM18KG121TH1D ferrite



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Orderable: AWR1843AOPEVM	Designed for: Public Release	Mod. Date: 09-06-2021
TID #: N/A	Project Title: xWR1843AOPEVM	
Number: PROC106	Rev: B	Sheet Title: BLOCK DIAGRAM
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 1 of 12
Drawn By: Antony/Anand Ram	File: PROC106B_BLOCK_DIAGRAM.SchDoc	Size: B
Engineer: Antony/Anand Ram	Contact: http://www.ti.com/support	

1	2	3	4	5	6
A					
B					
C					
D					

TABLE OF CONTENTS

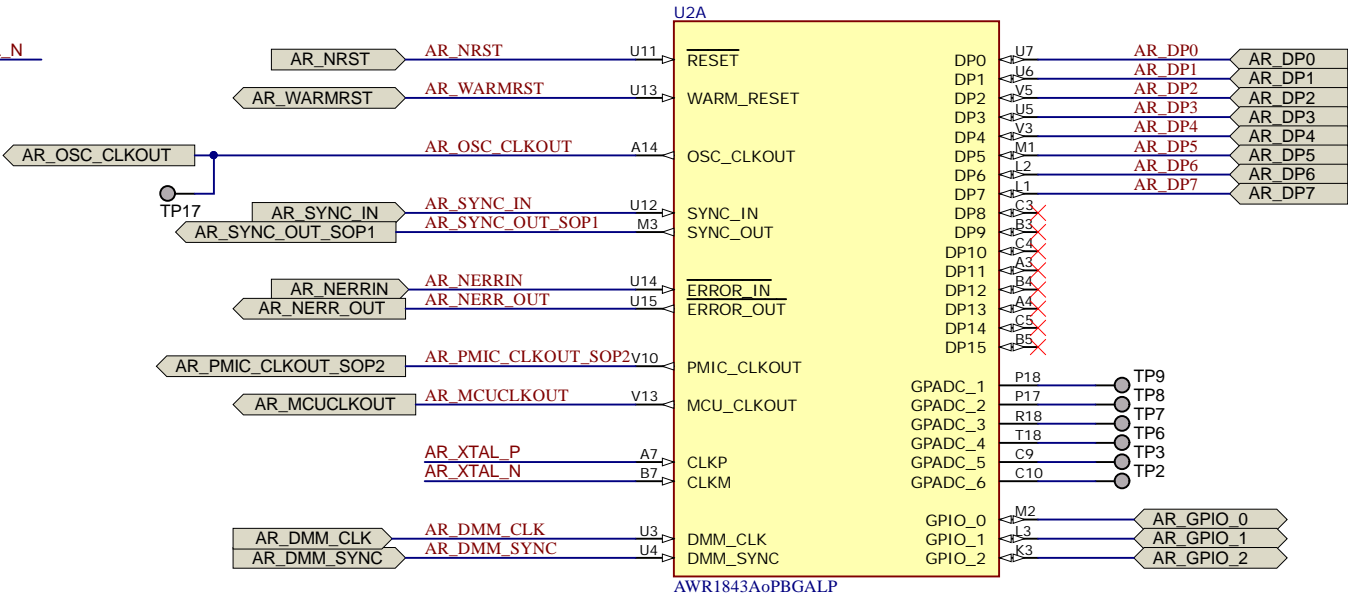
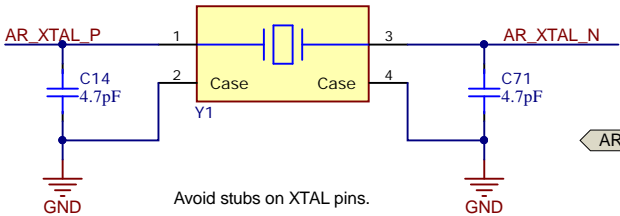
SHEET NO.	SHEET NAME
1	BLOCK DIAGRAM
2	TABLE OF CONTENTS
3	AOP_IO
4	AOP_PWR
5	PMIC
6	QSPI FLASH & USB_TO_UART
7	BREAKAWAY 60PIN HD CONNECTOR
8	BREAKAWAY_SECTION2
9	BREAKAWAY_SECTION3
10	BREAKAWAY_SECTION4
11	BREAKAWAY_SECTION5
12	HARDWARE

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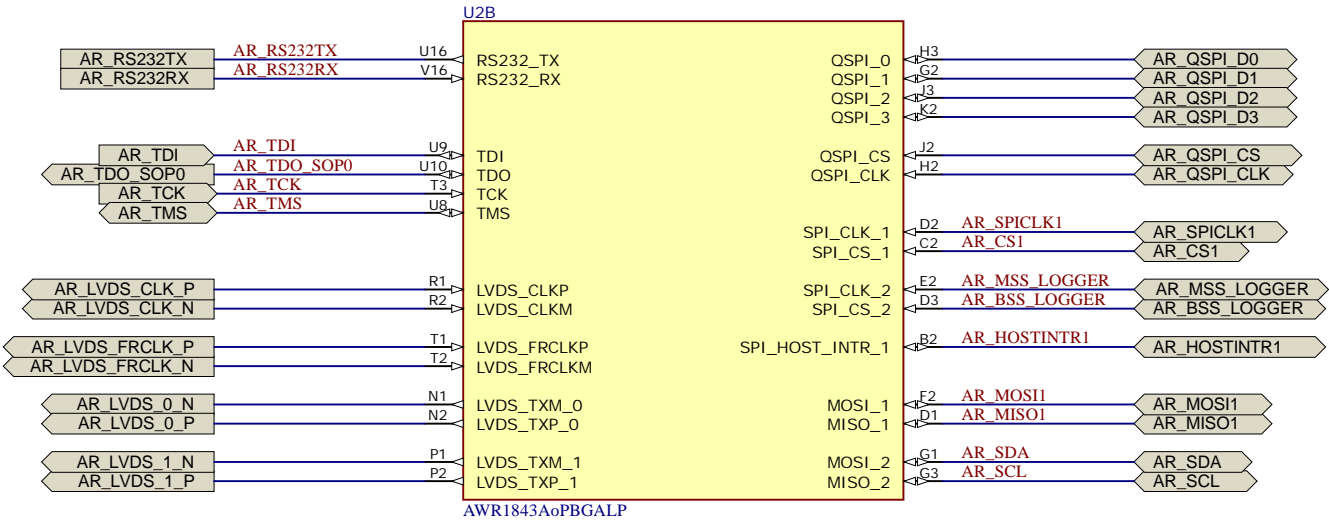
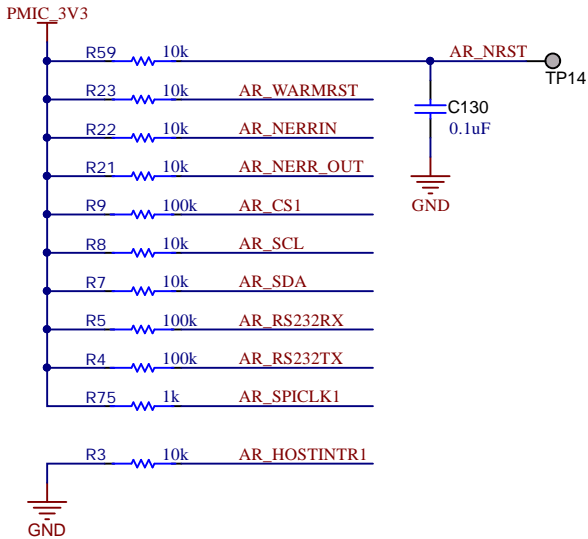
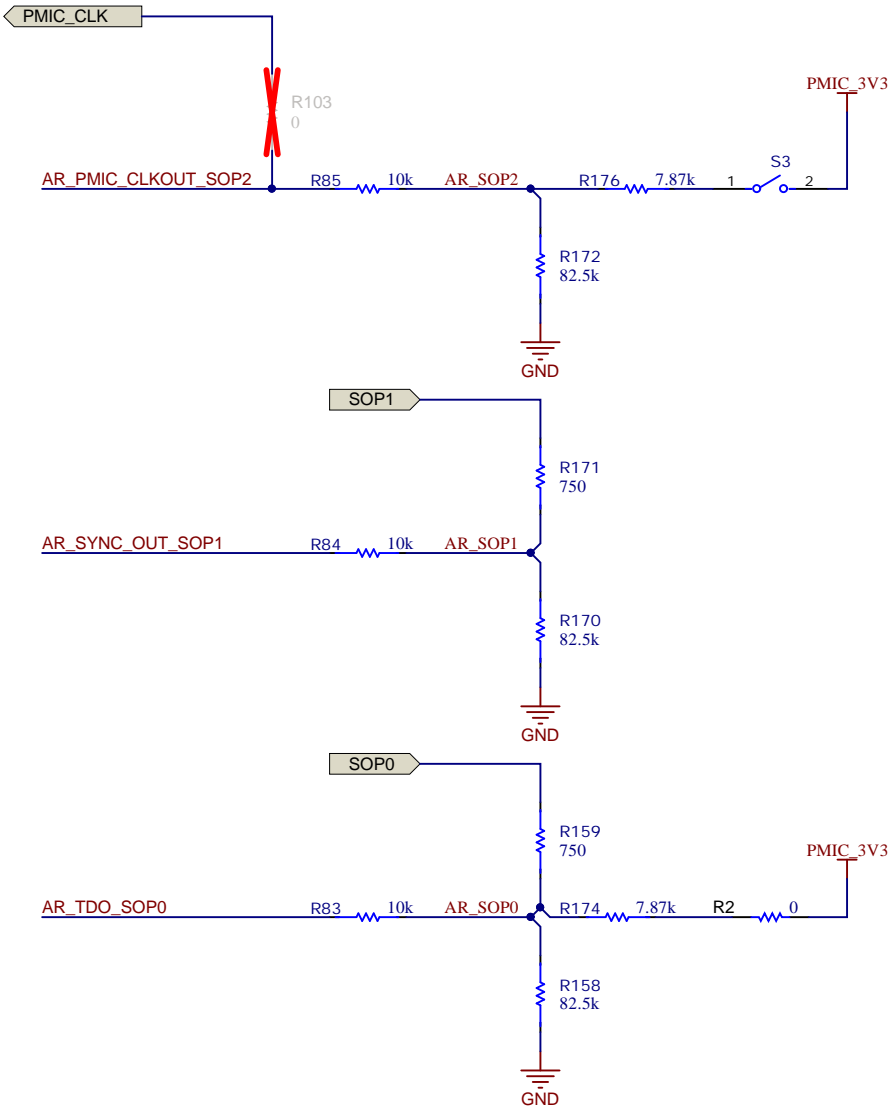
AOP IO

SOP_MODE2 - '011' - DEV/DEBUG
SOP_MODE4 - '001' - FUNCTIONAL MODE
SOP_MODE5 - '101' - FLASH MODE

40MHz CRYSTAL



SOP OPTIONS



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Orderable: AWR1843AOPEVM	Designed for: Public Release	Mod. Date: 09-06-2021
TID #: N/A	Project Title: xWR1843AOPEVM	
Number: PROC106	Rev: B	Sheet Title: AOP_IO
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 3 of 12
Drawn By: Antony/Anand Ram	File: PROC106B_AOP_IO.SchDoc	Size: B
Engineer: Antony/Anand Ram	Contact: http://www.ti.com/support	

A

A

B

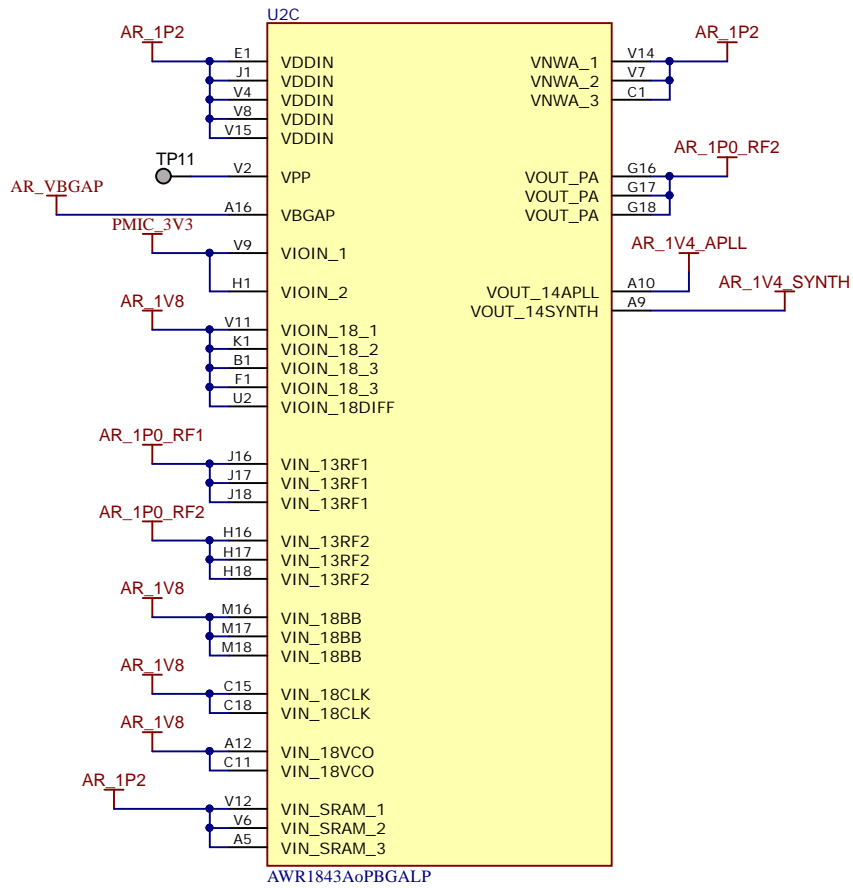
B

C

C

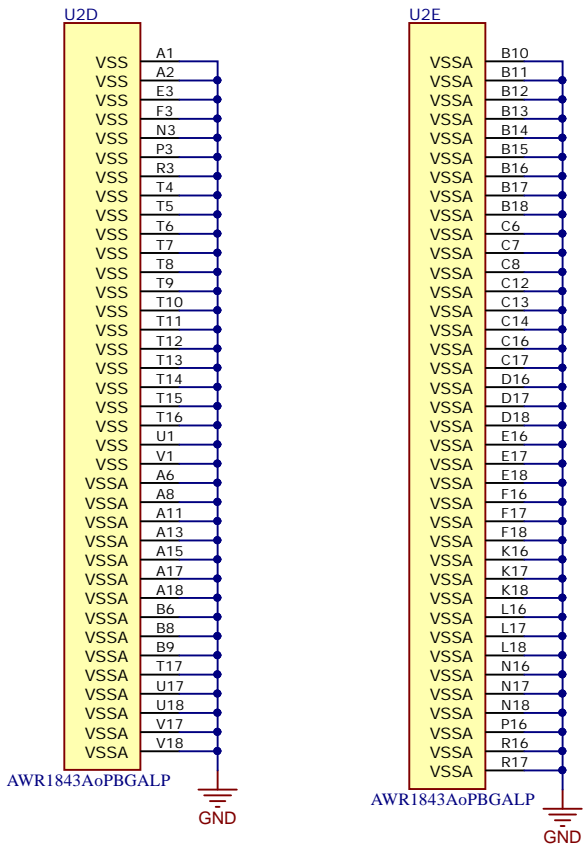
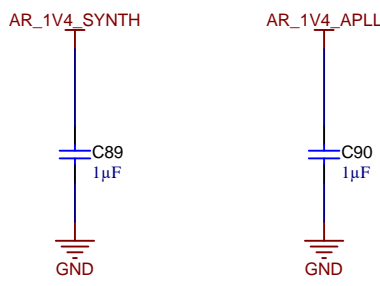
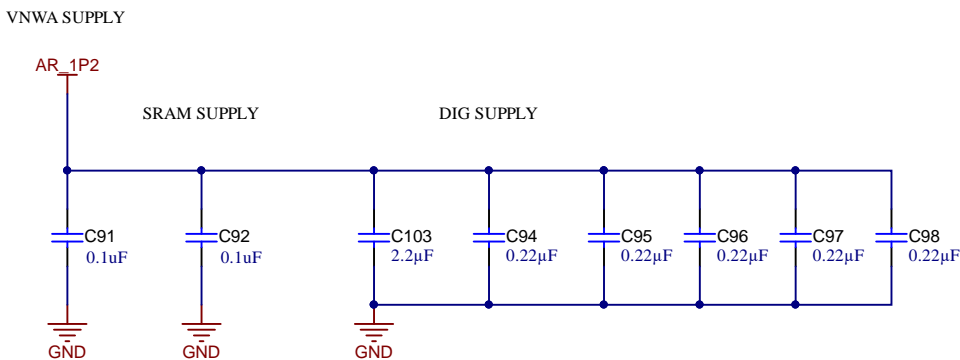
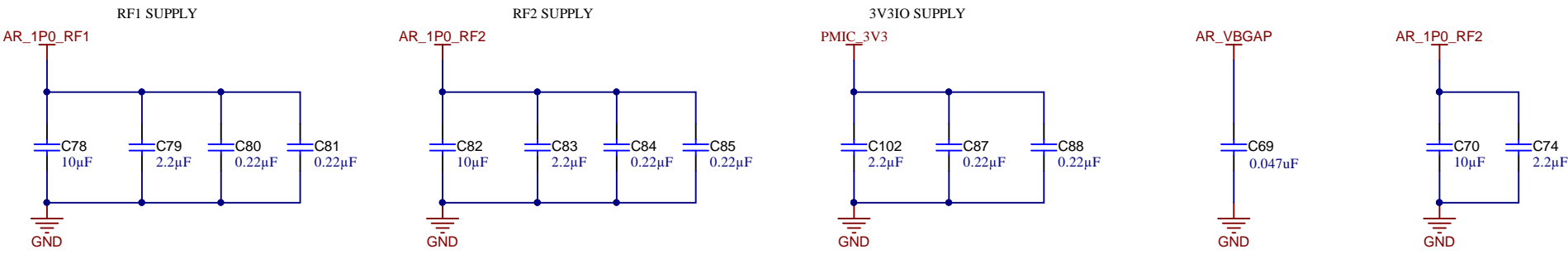
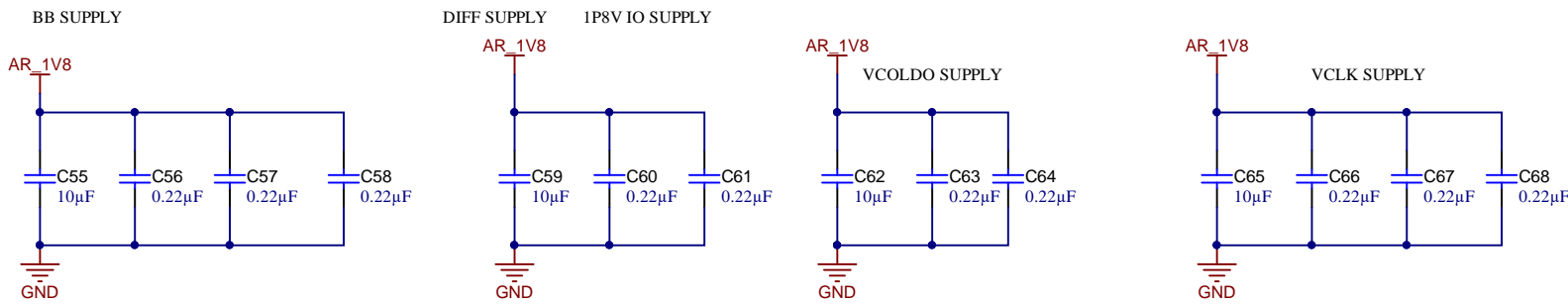
D

D



AOP POWER

DECOUPLING CAPS

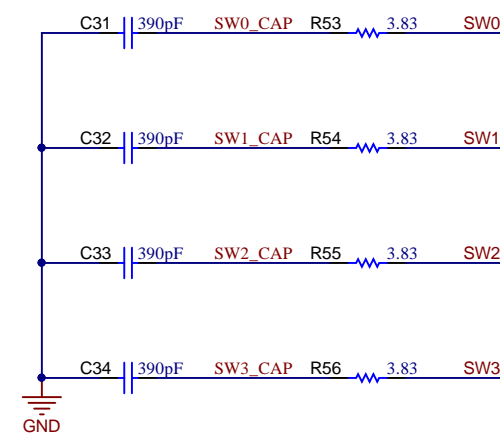
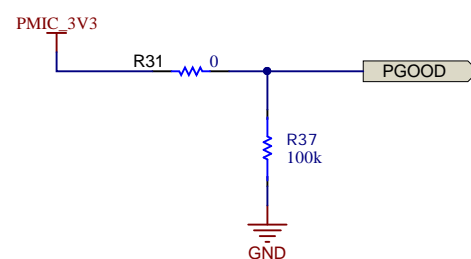
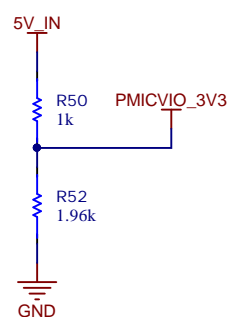
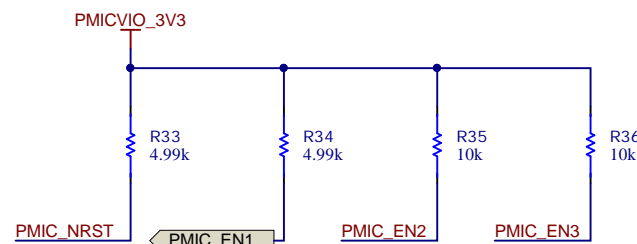
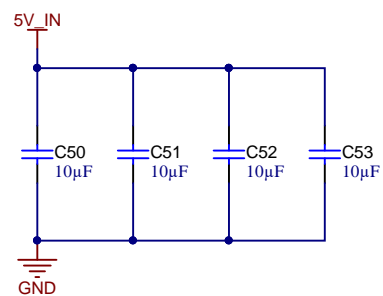
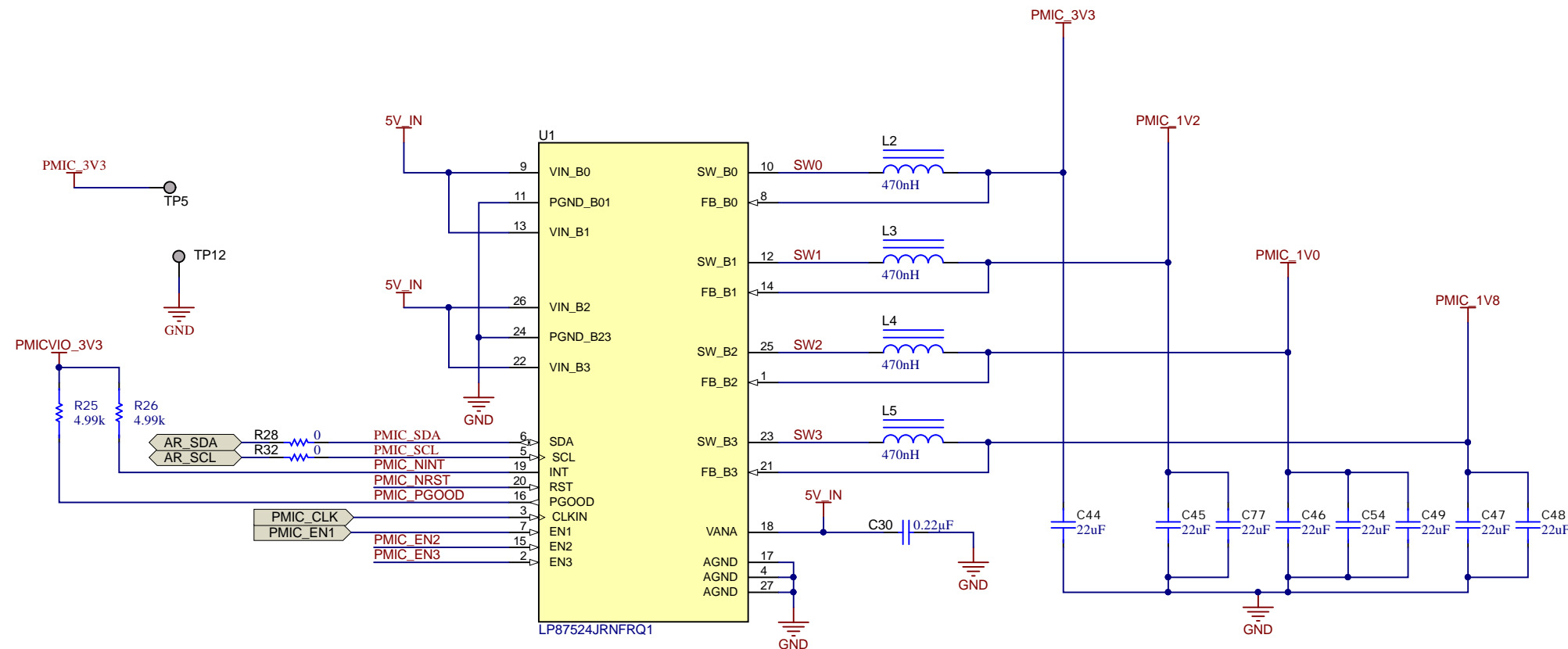


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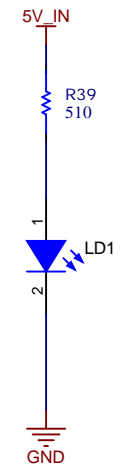
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TID #: N/A	Project Title: xWR1843AOPEVM	
Number: PROC106	Rev: B	Sheet Title: AOP_POWER
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 4 of 12
Drawn By: Antony/Anand Ram	File: PROC106B_AOP_PWR.SchDoc	Size: B
Engineer: Antony/Anand Ram	Contact: http://www.ti.com/support	



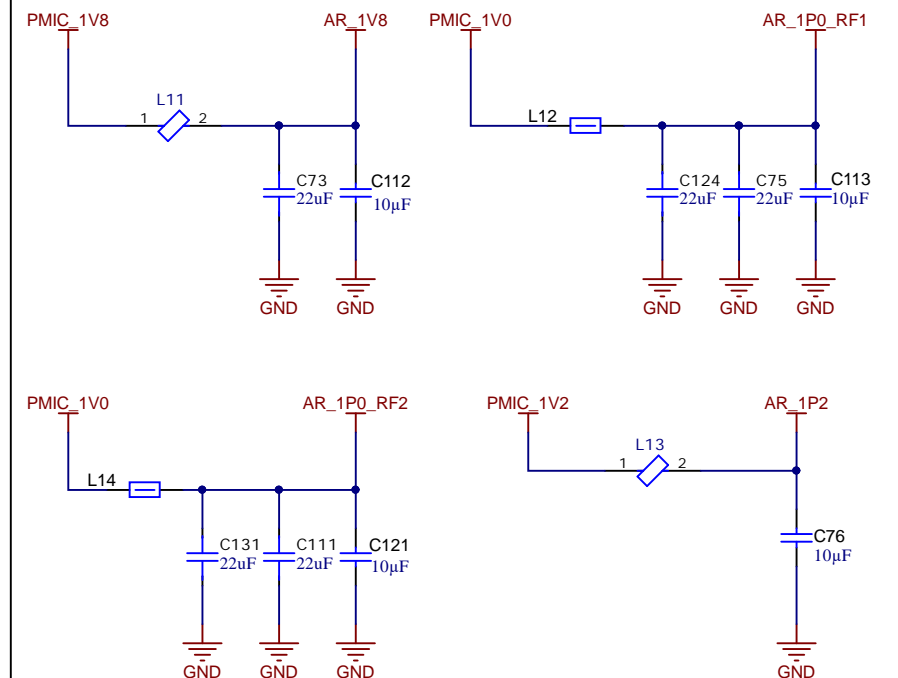
PMIC (3.3V, 1.2V, 1.0V, 1.8V OUTPUTS)



5V LED INDICATION



LDO BYPASS

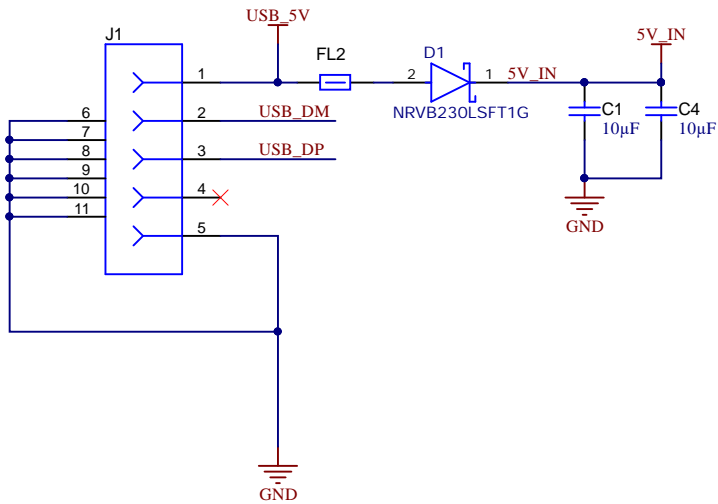


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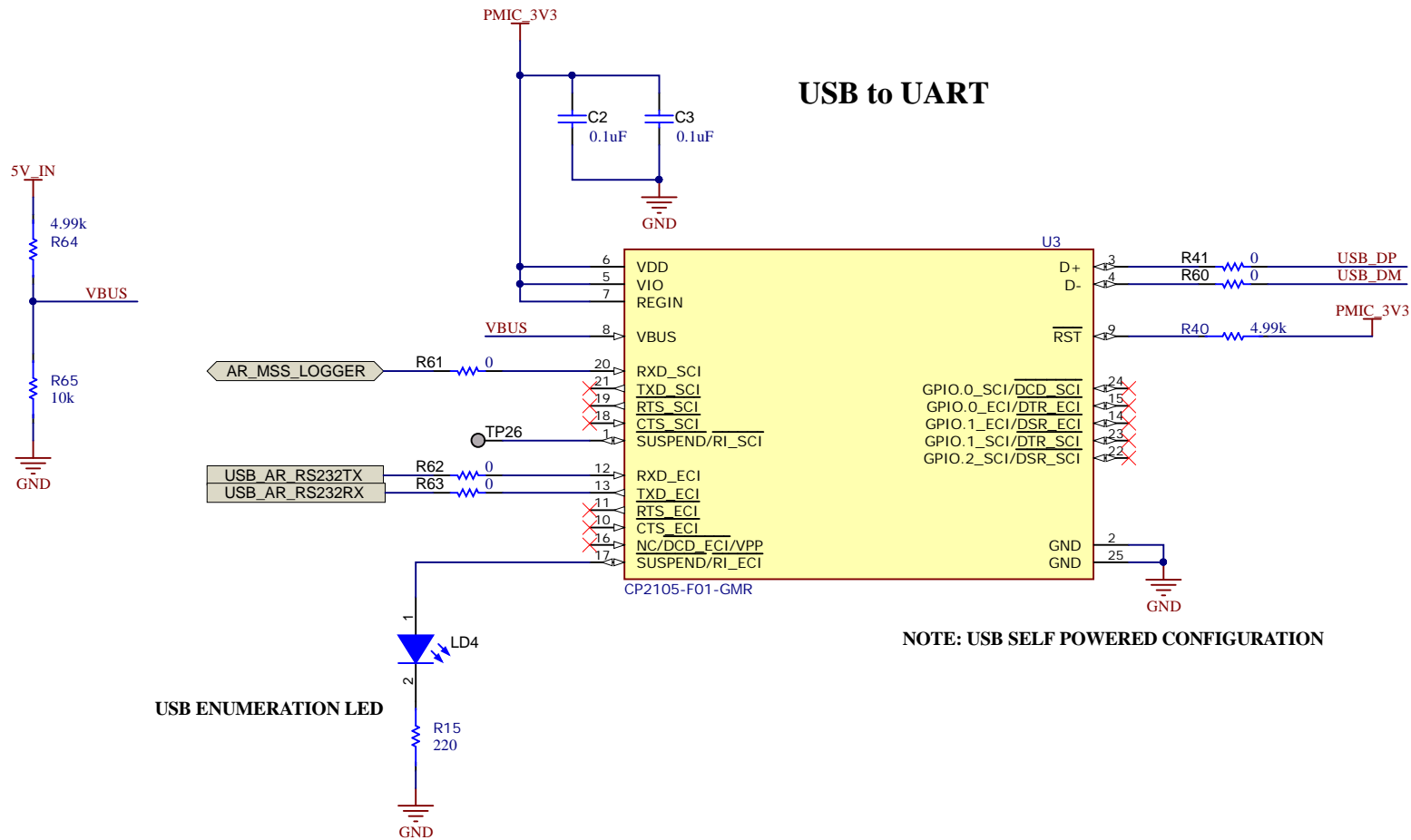
Orderable: AWR1843AOPEVM	Designed for: Public Release	Mod. Date: 09-06-2021
TID #: N/A	Project Title: xWR1843AOPEVM	
Number: PROC106	Rev: B	Sheet Title: PMIC
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 5 of 12
Drawn By: Antony/Anand Ram	File: PROC106B_PMIC.SchDoc	Size: B
Engineer: Antony/Anand Ram	Contact: http://www.ti.com/support	



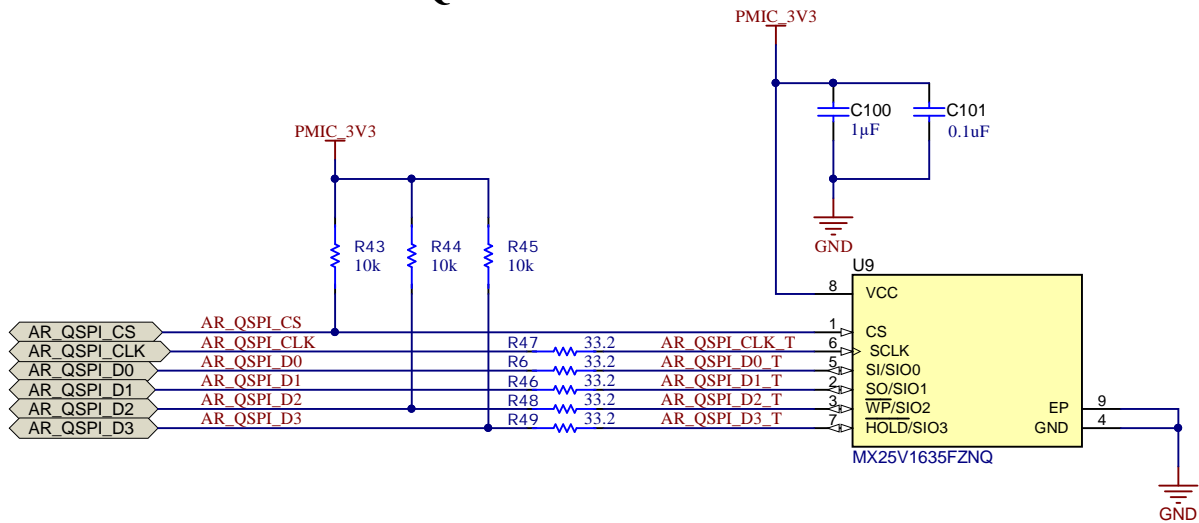
USB CONNECTOR



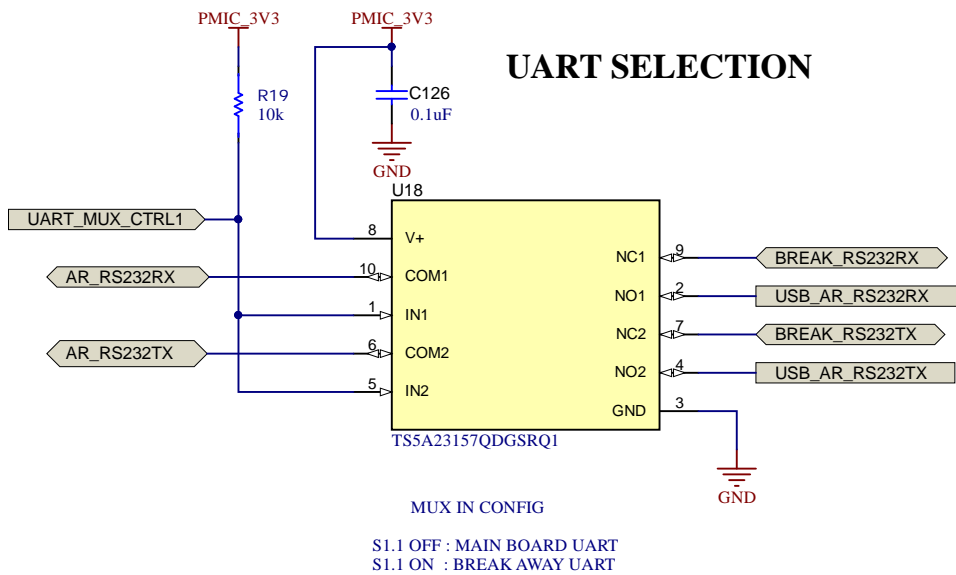
USB to UART



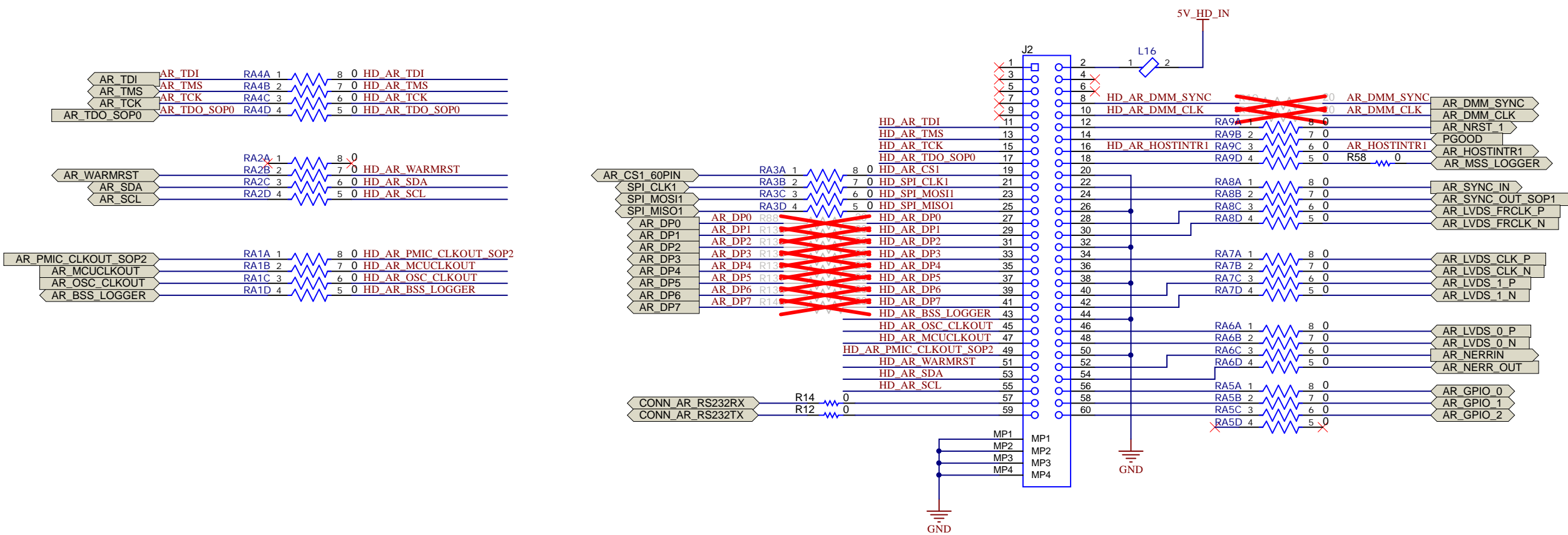
QSPI FLASH



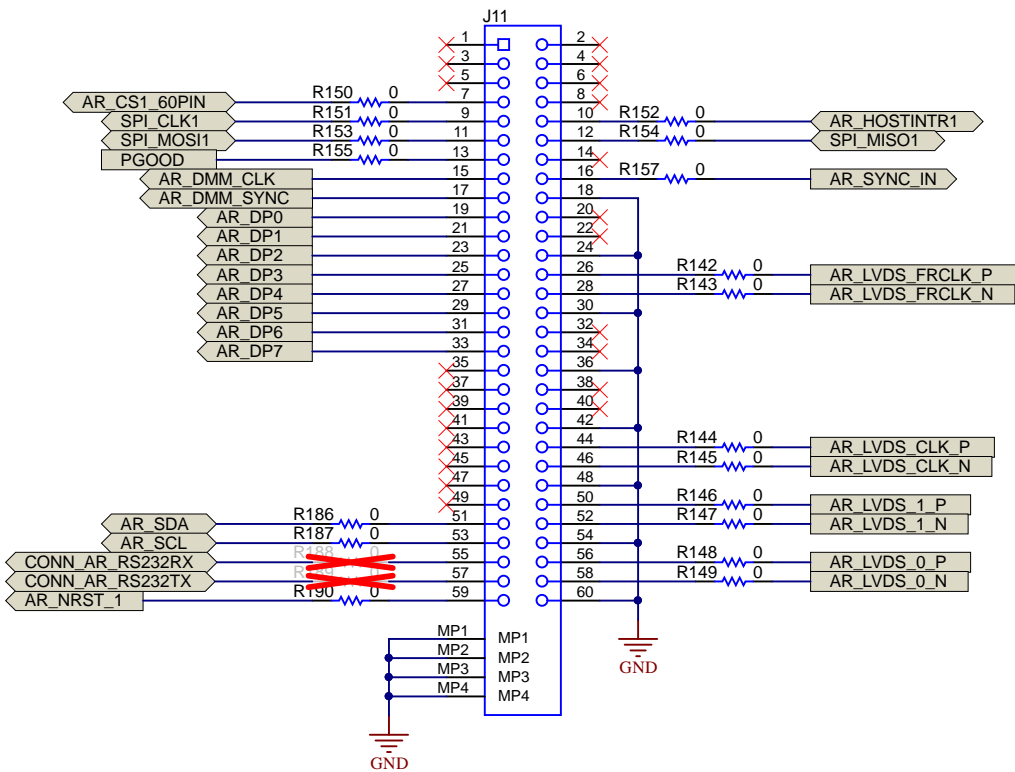
UART SELECTION



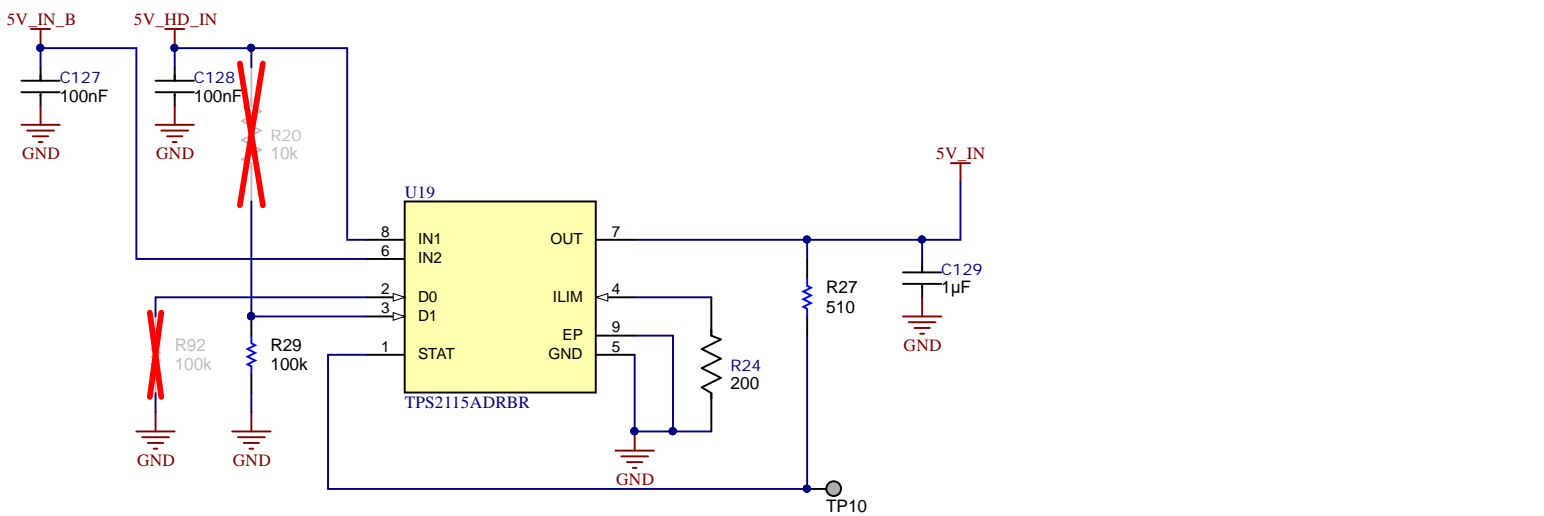
60PIN HD CONNECTOR FOR MMWAVEICBOOST



60PIN HD CONNECTOR FOR DCA1000



CONNECTOR PWR / USB PWR LOAD SWITCH



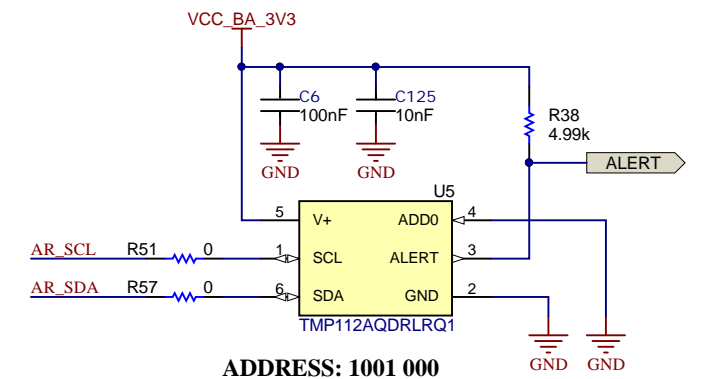
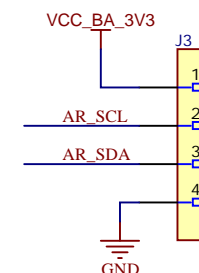
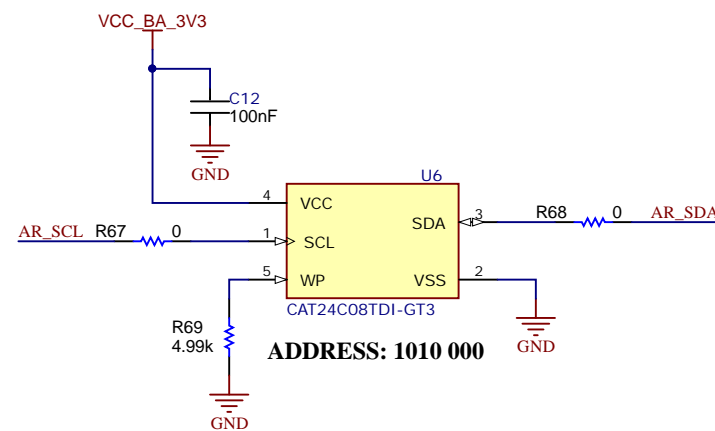
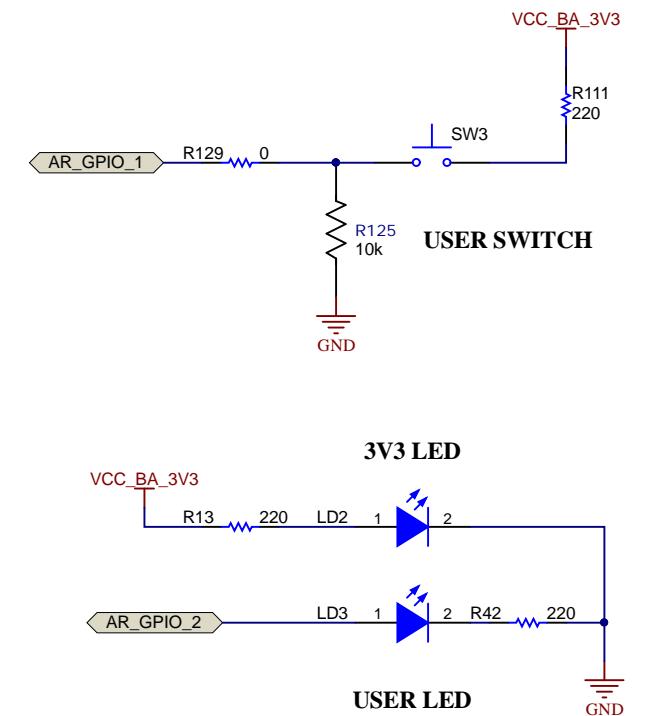
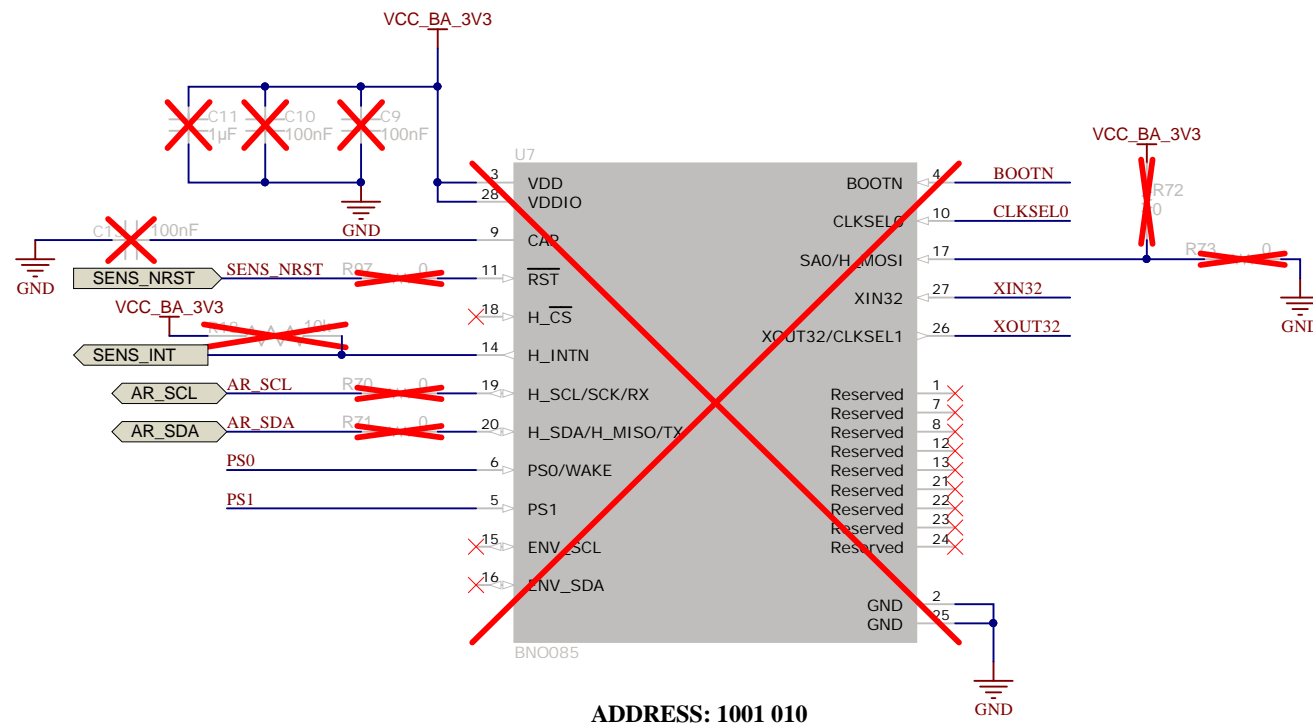
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Orderable: AWR1843AOPEVM	Designed for: Public Release	Mod. Date: 09-06-2021
TID #: N/A	Project Title: xWR1843AOPEVM	
Number: PROC106	Rev: B	Sheet Title: BREAKAWAY_60PIN_CONN
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 7 of 12
Drawn By: Antony/Anand Ram	File: PROC106B_HD_CONN_PWR_SW.SchDoc	Size: B
Engineer: Antony/Anand Ram	Contact: http://www.ti.com/support	



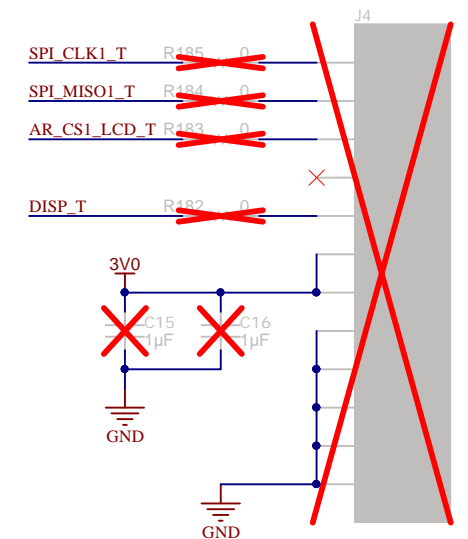
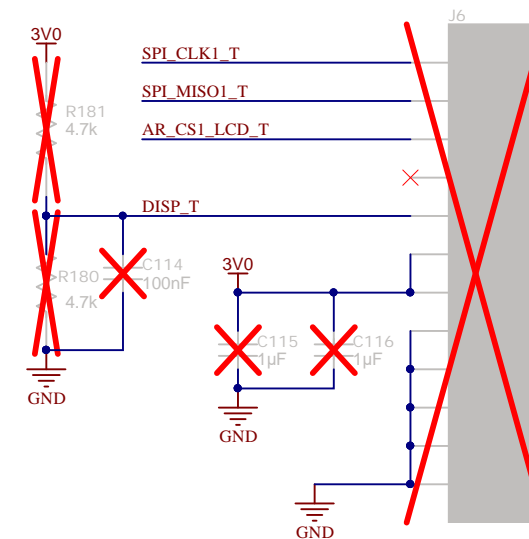
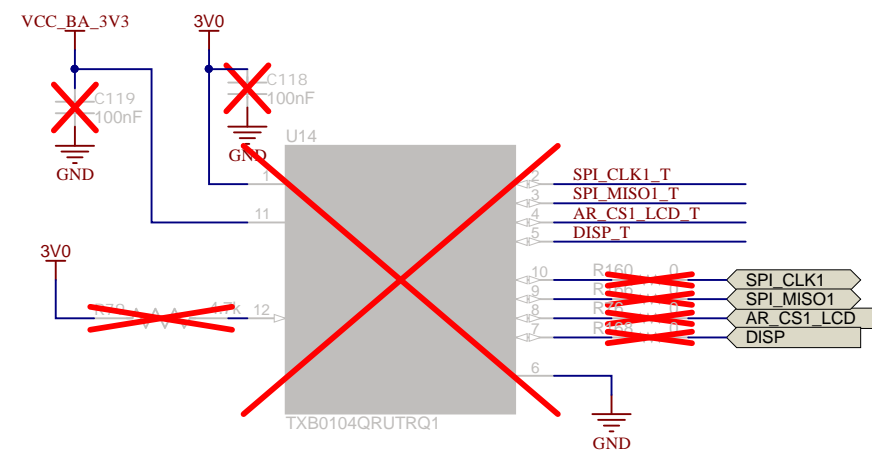
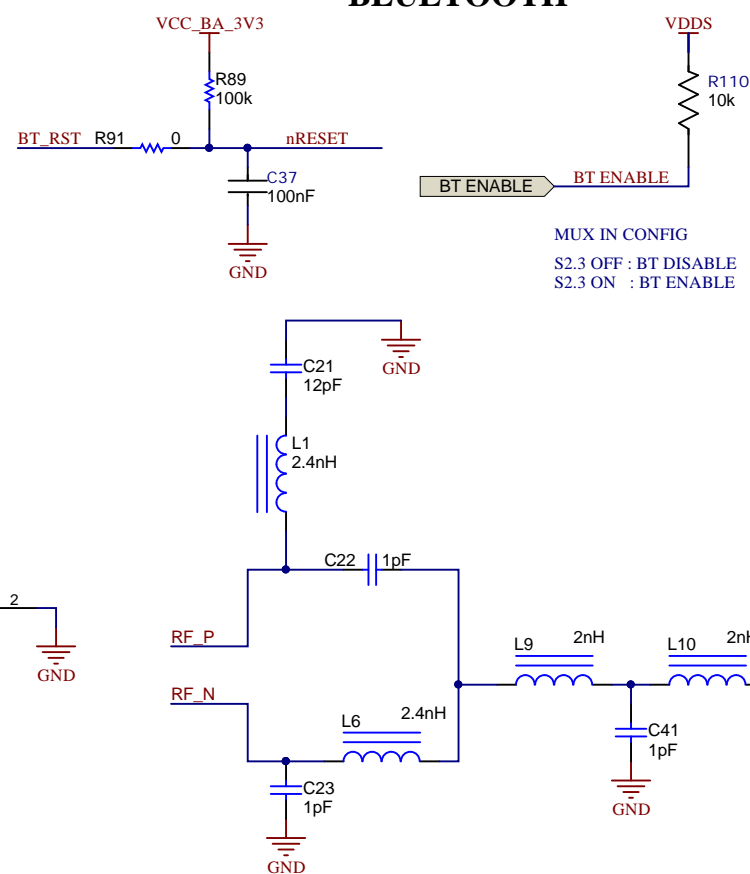
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9 - AXIS SENSOR



Orderable: AWR1843AOPEVM	Designed for: Public Release	Mod. Date: 09-06-2021	 TEXAS INSTRUMENTS http://www.ti.com © Texas Instruments 2019
TID #: N/A	Project Title: xWR1843AOPEVM		
Number: PROC106	Rev: B	Sheet Title: BREAKAWAY_SECTION2	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 8 of 12	
Drawn By: Antony/Anand Ram	File: PROC106B_RST_GPIOs_I2C.SchDoc	Size: B	
Engineer: Antony/Anand Ram	Contact: http://www.ti.com/support		

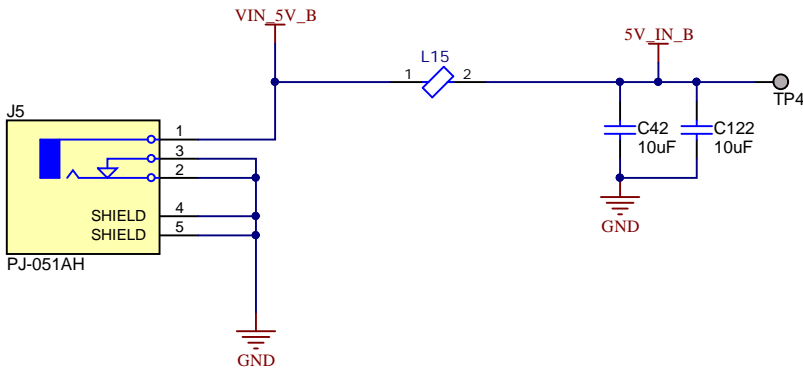
BLUETOOTH



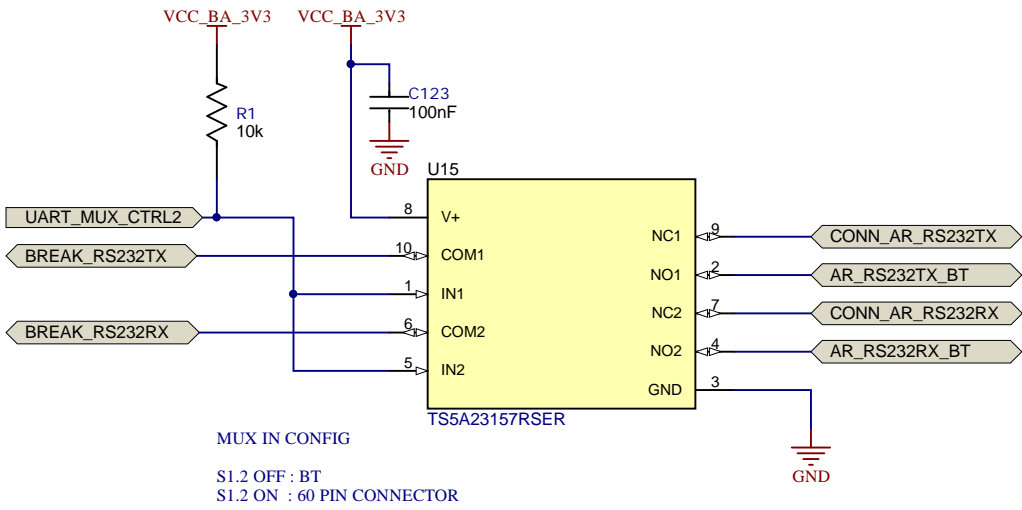
Orderable: AWR1843AOPEVM	Designed for: Public Release	Mod. Date: 09-06-2021	 TEXAS INSTRUMENTS http://www.ti.com © Texas Instruments 2019
TID #: N/A	Project Title: xWR1843AOPEVM		
Number: PROC106	Rev: B	Sheet Title: BREAKAWAY_SECTION3	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 9 of 12	
Drawn By: Antony/Anand Ram	File: PROC106B_BT_DISPLAY.SchDoc	Size: B	
Engineer: Antony/Anand Ram	Contact: http://www.ti.com/support		

BREAKAWAY_SECTION_4

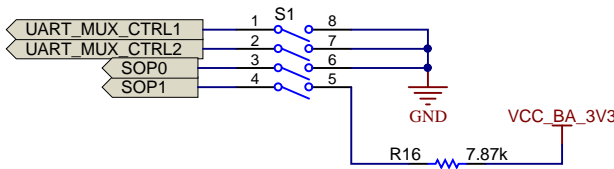
DC JACK



ANALOG MUX SELECTION FOR UART



SWITCH CONTROL MUX SELECTION, SOPs, BT CONTROL



SOP CONFIGURATION

Mode	SOP0 (S1.3)	SOP1 (S1.4)	SOP2 (S3)
Functional Mode	OFF	OFF	OFF
Flash Mode	OFF	OFF	ON
MMWAVEICEBOOST mode (DCA1000, JTAG, and so forth)	OFF	ON	OFF

PIN MUX SETTINGS

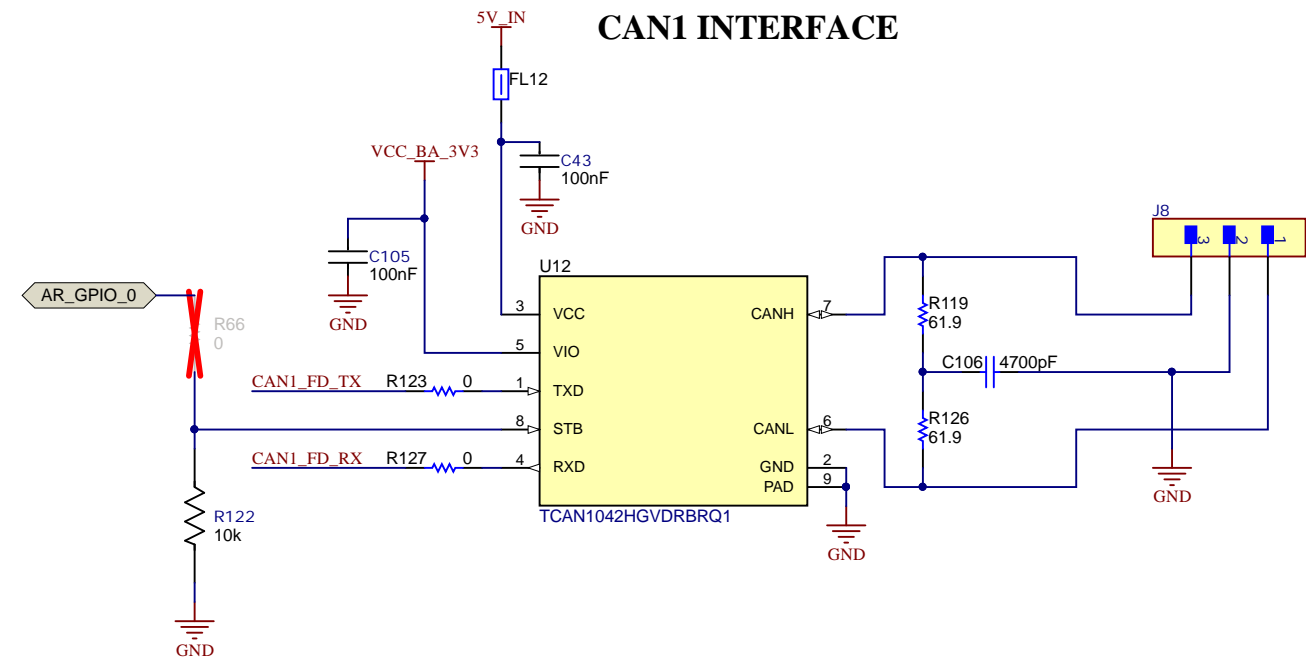
Designator	Switch ON	Switch OFF
S1.1	Breakaway UART	CP2105UART
S1.2	60 Pin UART	BT UART
S2.1	CAN	SPI
S2.2	60 Pin CS	BT/LCD CS
S2.3	BT Enable	BT Disable

PIN MUX SETTINGS

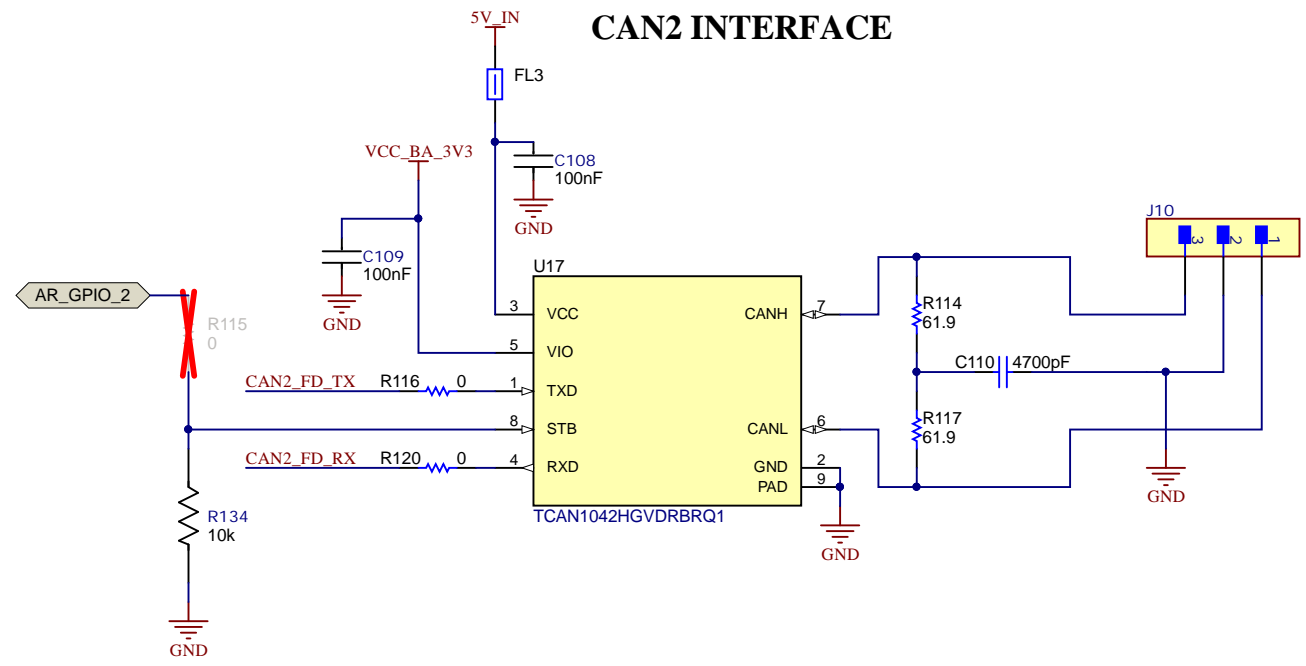
	S1.1	S1.2	S2.1	S2.2	S2.3
Stand alone Mode	OFF	N/A	N/A	N/A	N/A
MMWAVEICEBOOST	ON	ON	OFF	OFF	N/A

BREAKAWAY_SECTION_5

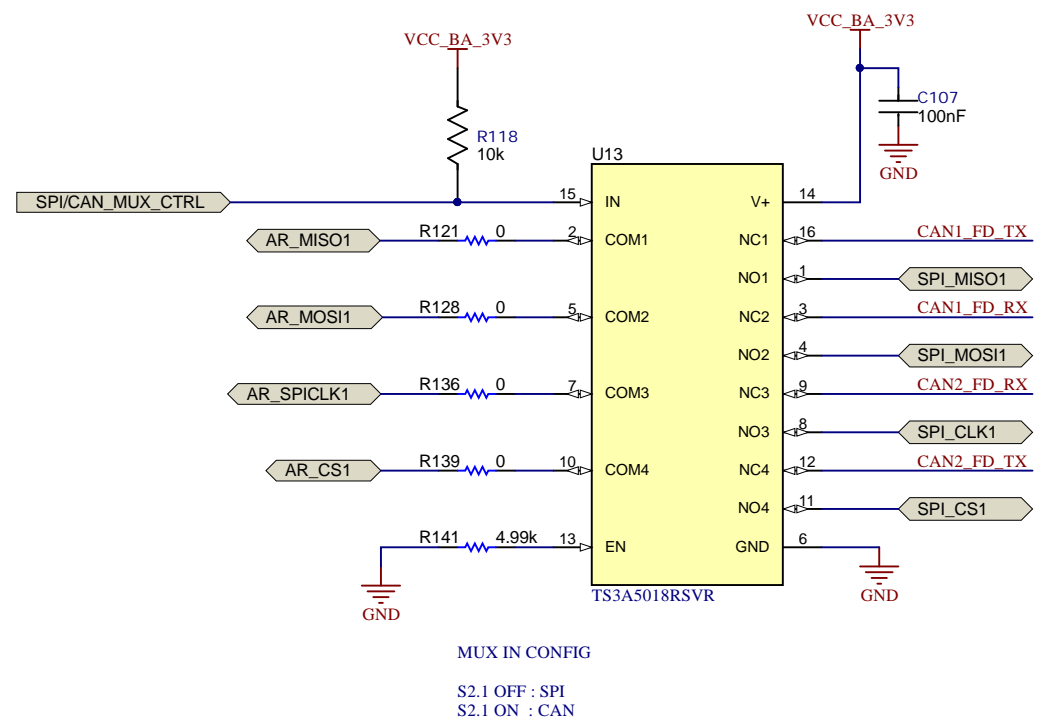
CAN1 INTERFACE



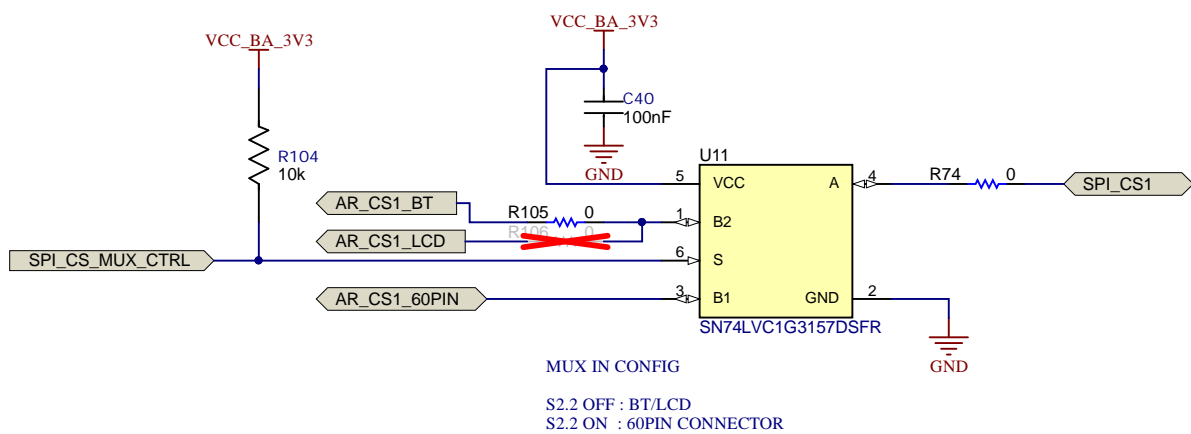
CAN2 INTERFACE



ANALOG MUX SELECTION FOR SPI/CAN



ANALOG MUX SELECTION FOR SPI CHIP SELECT



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HARDWARE



PCB Number: PROC106
PCB Rev: B



H1
MECH

H2
MECH

H3
MECH

LBL1
PCB Label
THT-14-423-10
Size: 0.65" x 0.20 "

LBL2
PCB Label
THT-14-423-10
Size: 0.65" x 0.20 "

ZZ1
Label Assembly Note
This Assembly Note is for PCB labels only

ZZ2
Assembly Note
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ3
Assembly Note
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

ZZ4
Assembly Note
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

ZZ5.1
Assembly Note
Cut the thermal pad(Part Number#GPVOUS-0.125-AC-0816) for the shape and size of the inner surface of the heatsink(Part Number#MCH065) and paste it on the inner surface of the heatsink;

ZZ5.2
Assembly Note
Bring the heatsink onto the PCB bottom side (Opposite side of AOP device). Match the teeth in the heatsink with break-away area in the PCB and press the heatsink onto the PCB slightly so as thermal pad is spread all over the area